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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,657	12/31/2001	Andrew S. Grover	P13477	3983
25694	7590	11/30/2005		
INTEL CORPORATION P.O. BOX 5326 SANTA CLARA, CA 95056-5326			EXAMINER NELSON, ALECIA DIANE	
			ART UNIT	PAPER NUMBER
			2675	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/039,657	<b>Applicant(s)</b> GROVER, ANDREW S.	
	<b>Examiner</b> Alecia D. Nelson	<b>Art Unit</b> 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8,9,13-17,20-24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-6,8,9,13-17,20-24,26-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. ***Claims 1-6, 22-24, and 26-29*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga (U.S. Patent No. 5,686,940) in view of Kushelvesky (U.S. Patent No. 5,668,743).

With reference to **claims 1, 22, and 26**, Kuga teaches a computer system comprising a processor (5), a display screen (1) and a sensor (2) to measure an approximate distance to a user (U) (see column 2, lines 30-42). The computer system also includes a memory (4) for storing image data, and a comparator (3), which converts the signal of the distance sensor (2) into signals for adjusting the display image or text (see column 33-40). It is further taught that upon starting the system a standard distance from the display is set and used by the comparator until a new distance is determined (see column 2, line 60-column 3, line 4).

Even though Kuga teaches that the comparator carries out the functionality of using the measurement code and configuration code as claimed, under control of the microcomputer in order to determine the distance between the user and the display in

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order to adjust the image or text accordingly, there is no disclosure that the comparator is a storage device. However, Kuga does teach the usage of a memory device for storing image data being a non-volatile memory such as a FRAM or EEPROM (see column 2, lines 36-42). With further reference to **claim 1** and with reference to **claims 6**, even though, Kuga teaches increasing the size of the image or text with decreasing the distance and decreasing the size of the image or text with increasing the distance between the display screen and the user (see columns 3, 16-43), there is no disclosure that the size in increases with an increase in distance or that the size decreases with a decrease in distance. However, it would be obvious to one having ordinary skill in the art, being that this system is run by software, that the software could be modified to allow the image size to be increased with an increase in distance as opposed to a decrease in distance and the image size to be decrease with a decrease in distance as opposed to a increase in distance.

Kushelvesky teaches a system and method for vision testing wherein visual test patterns displayed on a computer display are adjusted according to predetermined criteria with the distance between the subject being tested and the test pattern being monitored by the computer to achieve computer control and adjustment of test object size (see abstract). There is further taught an application of the invention for adjusting the size of the image on the computer display depending on the distance of the observer from the monitor. While not specifically disclosing that the display device is enhanced when the distance is increased, it is taught that that the size of the imaged is adjusted in order elevate viewing problems for users having visual difficulties (see

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column 2, lines 31-41). This thereby making it obvious to one skilled in the art that the image is enhanced when the distance is increased.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow for the usage of the method of image size adjustment as taught by Kushelvesky to be used with the system as taught by Kuga wherein the comparator unit is used as a storage device similar to that as explained with reference to the memory device used for storing image data and allowing the software to be modified to allow for an increase or decrease in image size based on the user distance to the display being far or close, respectively. By allowing the storage device to be a non-volatile memory device, which allows the device to store and retain settings after power down of the system and allowing the software to reconfigured to change image size based on the distance, the user has automatic adjustment of the size of the image or text being displayed on the flat panel device, which cause a reduction time need for making the manual adjustments through knobs or drop down menus as well as a reduction in the amount of eyestrain on the user.

With reference to **claim 2**, Kuga fails to teach that the display screen is that of a mobile system, however does teach the display device is a flat panel display device which is well known to those skilled in the art to be included in mobile systems.

With reference to **claim 3**, Kuga teaches that the sensor is located proximal to the display screen such that the distance to the user is an approximate distance between the user and the display screen (see column 3, lines 52-57).

With reference to **claims 4, 5, 27, and 28**, Kuga teaches that the sensor may be a position-sensing device, which inherently includes a camera, which acts as an active or passive type measurement system (see column 3, lines 52-57).

With reference to **claims 23, 24, and 29**, Kuga teaches with reference to Figures 2 and 3, that the size of the information includes a font size of text or an image (S).

3. **Claims 8 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuga in view of Kushelvesky as applied to **claims 1 and 22** above, and further in view of Fatch et al. (U.S. Patent No. 6,244,711).

Kuga and Kushelvesky teach all that is required as explained above with reference to **claims 1 and 22** however fails to specifically teach that the system modifies brightness or contrast level of the image.

Fatch et al. teaches that the system can utilize the position and orientation information to optimize the computer system setup (e.g., display font size, brightness, ect), as well as provide additional feedback through the computer system to the user (see column 6, lines 56-60), which could include audio data as well being that it is well known in the art for computer systems to include audio I/O devices.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to include display brightness, contrast, and audio control in order to provide an improved computer system that allows for simple and quick adjustments of the display characteristics as well as audio characteristics based on the users placement with relation to the display screen thereby providing the user with dynamic visual and audio feedback enabling the user to obtain a proper, ergonomic orientation with the computer work environment.

4. **Claims 9, 13-17, 20, 21, and 30-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Shim et al. (U.S. Patent Application Publication No. 2002/0068537) in view of Kushelovesky (U.S. Patent no. 5,668,743).

With reference to **claims 9, 15, and 30**, Shim et al. teaches a portable handheld radiophone including a control processor (85), and optionally including a memory unit, to control the processing of audio and/or data signals received from or to be sent to the antenna, wherein it is known for the processor or memory to include a machine-readable medium (see paragraph 30). The radiophone also includes a distance sensing and audio signal level adjustment system (31) for determining an approximate distance between a user and a sensor and configuring an audio device based on the distance (see paragraphs 15-18). Further with reference to Figure 4, there is described a capacitive proximity sensor (41) connected to a resonant oscillator circuit (47) to determine a parameter of the audio device using the distance (see paragraph 25).

While Shim et al. teaches the usage of a display device (84), there fails to be any disclosure of the display being controlled based on the distance from the user.

Kushelvesky teaches a system and method for vision testing wherein visual test patterns displayed on a computer display are adjusted according to predetermined criteria with the distance between the subject being tested and the test pattern being monitored by the computer to achieve computer control and adjustment of test object size (see abstract). There is further taught an application of the invention for adjusting the size of the image on the computer display depending on the distance of the observer from the monitor. While not specifically disclosing that the display device is enhanced when the distance is increased, it is taught that that the size of the imaged is adjusted in order improve viewing problems for users having visual difficulties (see column 2, lines 31-41). This thereby making it obvious to one skilled in the art that the image is enhanced when the distance is increased.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to allow the image size adjusting method as taught by Kushelvesky in a system similar to that which is taught by Shim et al. in order to provide a sound and display system which allow for adjustment of the audio and visual output to the user based on the distance of the user from the device. This would thereby provide output to the user at a larger range of distances without putting additional strain on the user to hear or see the output from the device.



With reference to **claims 13, 14, 20, 21, 31, and 33**, Shim et al. teaches that configuring the audio device comprises modifying a gain of a microphone or a volume of a speaker.

With reference to **claims 32 and 34**, While Shim et al. teaches the usage of a display device (84), there fails to be any disclosure of the display being controlled based on the distance from the user.

Kushelvesky teaches an application of the invention for adjusting the size of the image on the computer display depending on the distance of the observer from the monitor. While not specifically disclosing that the display device is enhanced when the distance is increased, it is taught that that the size of the imaged is adjusted in order elevate viewing problems for users having visual difficulties (see column 2, lines 31-41). This thereby making it obvious to one skilled in the art that the image is enhanced when the distance is increased.

Kushelvesky is combinable with Shim et al. for the reasons stated above with reference to **claim 30**.

With reference to **claims 16**, Shim et al. teaches that the sensor use an active or passive measurement system (see paragraph 21-24).

With reference to **claim 17**, Shim et al. teaches the usage of a sensor, however fails to teach that the sensor is a camera type sensor.

Kushelvesky teaches the usage of an optical distance measurement device (see column 2, lines 1-2), which would be used as the sensor for detecting the users distance from the device.

Kushelvesky is combinable with Shim et al. for the reasons stated above with reference to **claim 15**.

### ***Response to Arguments***

5. Applicant's arguments filed 5/27/05 have been fully considered but they are not persuasive. With reference to **claims 1-6, 22-24, and 26-28**, it is the applicant's position that the combination of Kuga and Kushelvesky will lead to a device in which when the distance is short the image is enlarged and when the distance is long the image is reduced. However, that is only the teaching of on reference, Kuga, and not the combination of the two references. Kushelvesky clearly teaches, as admitted by the applicant, adjusting the size of the image on the computer display to an optimum size depending on the distance of the observer from the monitor in order to thereby reduce visual difficulties experienced by the user. Therefore, if Kuga teaches decreasing the size of the image when the distance between the user and the display device increases and increasing the size of the image when the distance between the user and the display device decreases, it would be obvious to one having ordinary skill in the art to allow for the image size to be increased when the distance between the user and the display device increases and allow for the image size to be decreased when the distance between the user and the display device decreases in order to thereby

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improve the users visibility when viewing the image as taught by Kushelvesky. With further reference to **claims 9, 13-17, 20, 21, and 30-34**, the arguments presented by the applicant argues that the references fail to teach that the audibility of the audio device and visibility of information displayed on the display device is enhanced when the distance is increased. However, as explained above Shim teaches the usage of sensors for detecting the users' distance from the device and Kushelvesky teaches adjusting the image size as previously explained. Therefore the examiner maintains the rejection as applied above.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alecia D. Nelson whose telephone number is 571-272-7771. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

adn/ADN  
November 21, 2005

  
SUMATI LEFKOWITZ  
SUPERVISORY PATENT EXAMINER